CALIFORNIA ACADEMY OF SCIENCES

Annual Report for the Year 1949

CALIFORNIA ACADEMY OF SCIENCES
GOLDEN GATE PARK
SAN FRANCISCO 18

BOARD OF TRUSTEES, 1949

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The President of the Academy, *ex-officio*
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At the annual election held on February 16, 1949, the following officers were elected and served during the year:

M. E. Lombardi, *President*
Professor E. B. Babcock, *First Vice-President*
Dr. George S. Myers, *Second Vice-President*
Professor E. O. Essig, *Corresponding Secretary*
Dr. J. Wyatt Durham, *Recording Secretary*
Francis P. Farquhar, *Treasurer*

The COUNCIL of the Academy consists of the above-mentioned officers with the addition of the Director, Dr. Robert C. Miller, and the Librarian, Dr. Charles H. Danforth.

REPORT OF THE PRESIDENT FOR THE YEAR 1949

In endeavoring to report to the membership each year on the progress, conditions and needs of the Academy, as is required by the constitution, the writer becomes distinctly aware that the work of an institution such as ours is a continuing process. Except for certain statistical data it cannot easily be tied to set periods of time. This is especially true of progress; the accomplishments of any one year are usually, if not always, the results of the research work and planning of many previous years.

So it is with our building program. The necessary funds were accumulated over many past years and are still being accumulated, plans were drawn in 1948 and construction started in 1949. During the latter year the new building, including the planetarium, has progressed to its final size and form, if not to its final appearance. When completed this structure will add some sixty per cent to the exhibition and working space of the Academy's plant and it is now evident that our institution is on the threshold of becoming one of the most complete scientific centers of this or any other country. In fact it will be almost unique in that besides being able to present to our members and the public an aquarium and halls of natural history exhibits backed by adequate research laboratories and library, we will soon have under the same roof one of the most modern planetariums in the world.

Likewise progress in research is a matter of years. Although we published fewer pages of PROCEEDINGS and OCCASIONAL PAPERS in 1949 than in 1948, the number was much greater than in 1947, and in addition two notable books were produced by members of the staff, the result of years of field and laboratory work. I refer to Dr. Orr's "Mammals of Lake Tahoe" and Mr. Howell's "Marin Flora." The latter volume, though off the press this year, was brought to completion during 1949.

Under progress in research should be noted the collecting work now carried on off shore in connection with the examination of the continental shelf off northern California. This project was initiated during the past year with the cordial cooperation of the United States Navy and has opened a new field of activity for our scientific staff.

A report on the condition of the Academy should, no doubt, include a statement of its financial situation and an opinion, for it can be only an opinion, of the activities and morale of the staff. A comprehensive financial statement appears in the Treasurer's report in this volume. In your president's opinion the morale and spirit of the staff have been high. Design and construction work on the planetarium projector, design and work on the exhibits for the new dioramas and the multitude of detail incident to preparing for the opening of the new building have been taken in stride by the Director and his staff without too much interruption of routine duties and with enthusiasm.

We now approach the third and last subject of this report—the needs of the Academy. Here again we have a continuing problem. We always need more money and more members. Our membership is not yet anywhere near what it should be in view of the population which we serve although it has increased by more than fifty per cent since the war. Likewise the number of subscribers, other than members, to PACIFIC DISCOVERY is not adequate to support that magazine in its present form. Exploration and field collecting trips by members of the staff are among our needs if we are not to confine our research to laboratory work only. It is impossible to provide properly for extensive field trips on our limited budget and we very much need the financial help of friends of the Academy for that purpose. And last but not least, as I have often pointed out, we need a new library building to house properly our large and growing library. Here is where we really need a generous friend. Provision has been made in planning the new building now being constructed, for the addition of a modern library stack. All we need now is the generous friend, whose name, when it appears, might well be commemorated as have those of our other major benefactors.

Membership

As of December 31, 1949, the roll of the Academy's membership stood as follows:

Regular Members	994
Life Members	210
Honorary Members	26
Fellows	93
Patrons	53
Associate Members	18
Special Observers	19
Corresponding Members	9
Student Members	129
Total	1,551

This is an overall increase of only 61 for the year, a rather disappointing showing.

Five life members were added to the rolls; two of these, Mr. R. F. Henley and Mrs. George Willett, were elected in recognition of valuable gifts to the Academy.

Mr. Anatole S. Loukashkin was designated a Fellow. Mr. Loukashkin gave to the Academy his valuable collection of birds and mammals from Manchuria and Korea.

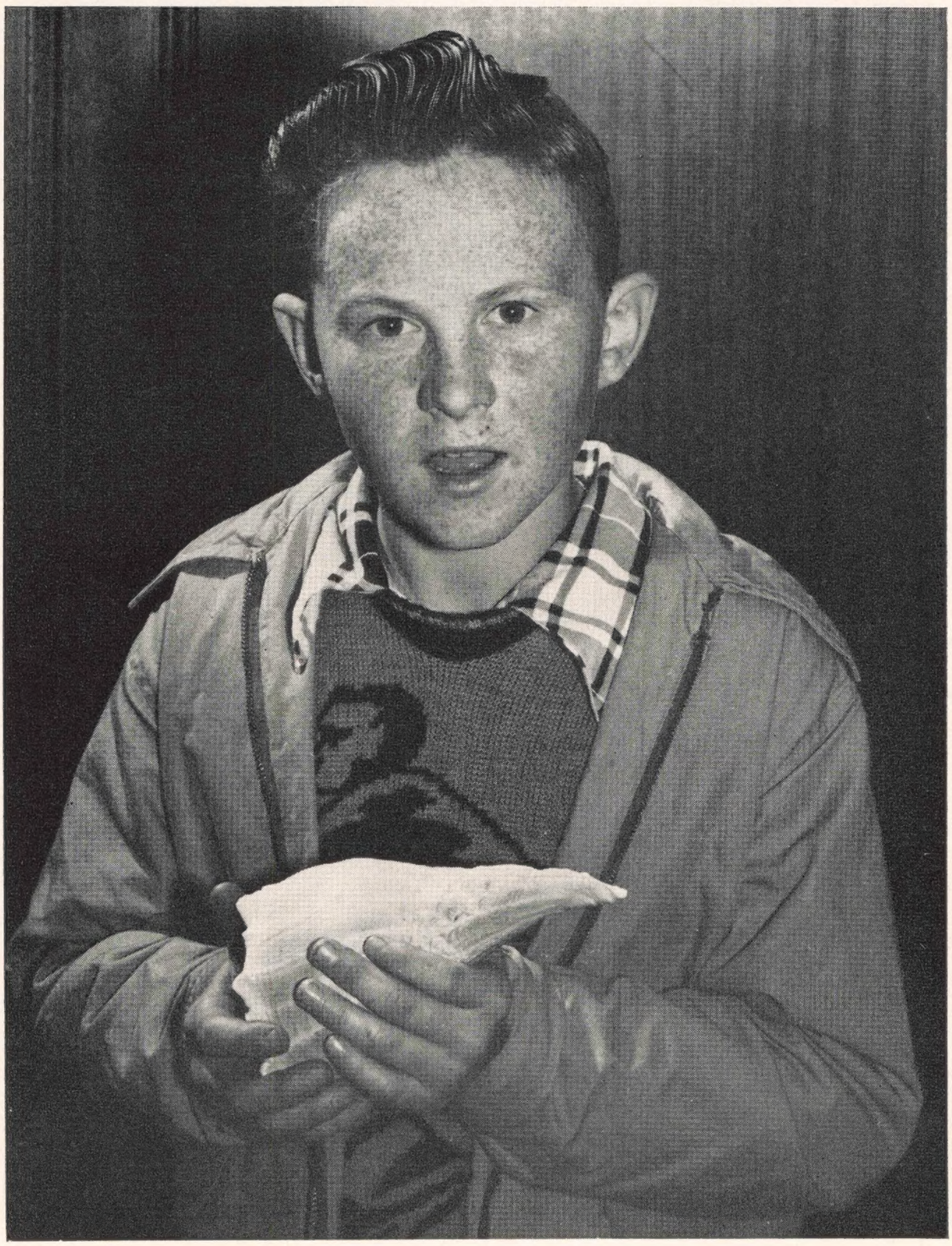
Miss Louise A. Boyd was elected an Honorary Member at the annual meeting in February 1949, in recognition of her outstanding work in the

field of Arctic exploration. Miss Boyd served for many years as a trustee of the Academy.

The Seventh Pacific Science Congress was held in New Zealand in February 1949, and the Academy was represented at this important gathering by Director Robert C. Miller and Vice-President George S. Myers.

It is with regret that I have to report the death of twenty-seven members during 1949, including Mr. Robert Van Vleck Anderson, a Fellow since 1944; Mrs. A. Hass, a Patron since 1948; Professor William B. Herms, a Fellow since 1944; Dr. Gayle B. Pickwell, a Fellow since 1942; Miss E. Marion Warren, a Patron since 1948; Dr. Bailey Willis, a Fellow since 1926; and Dr. Ray Lyman Wilbur, a Fellow since 1928.

M. E. L.



"There is no person nor personage more welcome in this institution than a small boy with something clutched in his fist that he wants to know the name of."

REPORT OF THE DIRECTOR

For the Year Ending December 31, 1949

In the year 1949 two million people, two and a half times the population of San Francisco, passed through the doors of the Academy's buildings in Golden Gate Park. Some came because they wished to learn, some came because they were brought by friends who were showing them the city, some wandered in because they happened to be in the park on a sunny afternoon. Whatever the reasons for their coming, one may safely say that every one of those two million visitors went away with more knowledge than he had when he came in—with greater understanding of the world about him. For it is impossible to walk through these halls, even in careless or casual mood, without learning something of value.

The visitor may be a nature lover who finds in our carefully worked-out habitat groups an answer to his questions regarding the relations of animals to their environment. He may be an amateur ornithologist who finds in our Hall of Birds the particular bird he has been trying to identify.

If he likes minerals, we have a large and well arranged collection, and are adding to it week by week. If he is an amateur mycologist, i.e., if he collects mushrooms and hopes to live to tell the tale, he can compare his specimens with the accurate models of edible and poisonous fungi we have on exhibit. If he is interested in fish — as a sportsman, a tropical fish fan, or otherwise — in our Aquarium he can look and linger and dream.

If he is a small boy collecting butterflies or beetles or minerals or shells, he can bring them here and learn their names, and find out how to make and keep his own collection. There is no person nor personage more welcome in this institution than a small boy with something clutched in his fist that he wants to know the name of.

In the new addition soon to be opened we shall be even better equipped to contribute to the education of young and old, to teach the lesson of man's place in nature, and the place of his world in the starry universe.

Attendance

The public attendance at the Academy in 1949 was the largest in the history of the institution. The total figure, 2,039,686, represents an overall increase of 109,479 over the preceding year, or 5.6 per cent. Comparison with the statistics of ten years ago indicates not only sustained but growing public interest.

	1939	1949
North American Hall . . .	380,070	442,561
Simson African Hall . . .	149,160	453,383
Steinhart Aquarium . . .	944,983	1,143,742
Total	1,474,213	2,039,686

The Academy continues to attract in increasing numbers classes from public schools, colleges and universities in the area. As far as possible, staff members of the Academy provide conducted tours for these groups. However, the increase of forty per cent in this type of attendance has not permitted extension of this service to meet the demand. A total of 1,470 groups, aggregating 55,704 individual students, visited the Academy in 1949.

Details are as follows:

	1948		1949	
	GROUPS	PERSONS	GROUPS	PERSONS
North American and Simson African Halls . .	564	21,780	888	33,836
Steinhart Aquarium . . .	485	16,272	582	21,868
Total	1,049	38,052	1,470	55,704

Public Lectures

The following public lectures were given under the auspices of the Academy during 1949, those marked with an asterisk being lectures supported by the Dr. Walter B. Scaife Foundation:

January	26	Mr. Carl W. Buchheister, National Audubon Society: Wildlife Down East*
March	3	Mr. Allen D. Cruickshank, National Audubon Society: Trails for the Millions*
April	6	The Reverend George M. Link, National Audubon Society: Alluring Alaska*
May	4	Dr. Robert C. Miller, California Academy of Sciences: Tree Ferns and Glaciers
June	1	Dr. Edward S. Ross, California Academy of Sciences: Touring Mexico's Life Zones
July	13	Mr. R. W. L. Potts, California State Department of Agriculture: Travels in Truk
August	17	Mr. Robert P. Dempster, California Academy of Sciences: Salt Water Beauties of Hawaii
September	28	Mr. Allyn G. Smith, California Academy of Sciences: Rediscovering the Farallones
October	19	Dr. Sunder Lal Hora, Director of the Zoological Survey of India: Fish Farming in the Far East
November	23	Mr. Bert Harwell, National Audubon Society: Canada West*
December	7	Professor George E. MacGinitie, Arctic Research Laboratory: Biology of the Arctic Ocean

Field Work

Of major importance in the field and exploration work of the Academy this year has been the study of the continental shelf conducted for the Office of Naval Research under direction of Dr. G. Dallas Hanna. Two trips of a week each were made to sea during the year on the U.S.S. Mulberry for dredging operations. Considerable material has been obtained which is now undergoing sorting and study. A number of additional trips are planned for the early future.

Dumping the dredge on the deck of the good ship "Mulberry" after a drag on the Pacific continental shelf

The Department of Entomology in 1949 completed its one-man expedition to Africa with the return of Borys Malkin, Academy research associate, from a sixteen-months' trek from Cairo to Capetown. Other field trips were made by members of the department, including a week's journey to the Colorado desert by Dr. E. C. Van Dyke and Dr. Edward S. Ross; Hugh B. Leech, Associate Curator, made a collecting expedition to British Columbia and also a number of shorter trips.

The Department of Ichthyology conducted or participated in twenty-six field trips, nineteen exploratory and the others collecting, in Arizona and California. Joseph Slevin, Curator of the Department of Herpetology, and the late Mr. Wallace Wood made a collecting trip to Southern California, Arizona, and northern Sonora, Mexico, to collect desert snakes. John Thomas Howell, Curator of the Department of Botany, spent a month collecting in the Sierra, and Robert T. Orr, Curator of the Department of Ornithology and Mammalogy, made two field trips to San Luis Obispo and Kern counties in conjunction with the study of the pallid bat.

For the most part, the time of the scientific staff has been given to the increasingly arduous tasks of caring for present collections and making them available for study and research, tasks that of necessity have limited the amount of collecting that can be done.

The 1949 One-Man African Expedition Made for the Academy by Borys Malkin

← *On the trail to Makete Beach, British Camaroons*

Clanwilliam, East Cape Province. In the arid regions of Africa, as in America, collectors must excavate to find the beetles

↓

Accessions

The Department of Botany accessioned 8,965 specimens during 1949, of which 2,834 were received as gifts, 4,874 in exchange, 1,057 by exploration, and 200 Brazilian plants by purchase. The total number of mounted specimens in the Academy herbarium at the end of 1949 was 352,737. Among the gifts to the Department of Botany two in particular should be noted: 1,462 specimens from South America and Europe from Lewis S. Rose, and 866 mounted specimens from the Ojai Branch of the Ventura County Public Library which constitute the Frank W. Hubby herbarium and are a valuable complement to extensive collections already in the Academy herbarium from Henry W. Pollard. Among the important specimens received by exchange were South American collections from Instituta Lillo in Tucuman, Argentina, and from the Riksmuseet in Stockholm.

The Department of Entomology in 1949 accessioned 68,281 mounted and labeled specimens from ninety-eight different sources. Of these 54,496 were gifts, 4,787 were received by exchange, and 8,998 by purchase. Of these last a substantial number were purchased and donated to the Academy by Dr. E. C. Van Dyke. In addition, an estimated 200,000 new unmounted specimens were received. The total collection of the Department of Entomology is estimated to contain 3,000,000 specimens.

Notable accessions in the Department of Herpetology include 250 specimens gathered on a field trip in the spring, and gift specimens from C. A. Abel, Robert Eimann, R. Glaser, G. W. Harvey, A. S. Loukashkin, Borys Malkin, Dr. Edward S. Ross, Miss Grace M. Sparks, Cecil Tose, and from the Steinhart Aquarium. Specimens in the Department of Herpetology total 75,000.

During the year of 1949, the Department of Ichthyology accessioned 28,571 specimens. These were received through department collecting and from twenty individual donors, bringing the estimated total of specimens in this department to 535,000.

The Department of Ornithology and Mammalogy received 658 mammals, 1,083 birds, 601 sets of eggs, 434 eggs not in sets, and 501 bird nests. The most outstanding accession was a collection of 511 mammals, approximately 1,000 birds, 600 sets of eggs, and 500 nests, all received as a gift from Mr. Anatole S. Loukashkin. These specimens are all species from Manchuria and, as far as known, constitute the most extensive collection of birds and mammals from that country in North America.

An important event of the year was the completion of the transfer to the Academy of the ornithological collection of the late James Moffitt, former Curator of the Department of Birds and Mammals. This important collection was formally presented to the Academy by Mrs. James Moffitt (now Mrs. Joseph C. Fennelly) on September 13, 1945, but because of lack of museum cases only a small part of the collection could be accommodated at that time.

The remainder was housed in part at the home of Dr. Herbert Moffitt and in part at the Museum of Vertebrate Zoology of the University of California. With the completion of 49 new bird and mammal cases in the Academy's shop this year, it became possible to house this collection of approximately 1,800 skins, mostly of waterfowl and upland game birds, at the Academy. The collections of the department, at the end of the year total: birds, 60,461 cataloged and 3,300 uncataloged; sets of eggs, 6,030 cataloged and 4,600 uncataloged; and mammals, 9,679 cataloged and 658 uncataloged.

Accessions for 1949 in the Department of Paleontology include an important collection of land shells made by the late George Willett, presented to the Academy by Mrs. Willett. Other collections, too numerous to detail, were received from upwards of one hundred different collectors and donors. Total specimens in the department at the end of the year are estimated at 1,650,000.

Accessions by the library of the Academy during the year totaled 13,849. It is interesting to note that of the accessions in this department, forty-three per cent were received by exchange, thirty-nine per cent by gift, and only eighteen per cent by purchase.

Among our generous donors of books have been Miss Alice Eastwood, Dr. Olaf P. Jenkins, Dr. J. L. Kask, Dr. Earle G. Linsley, Mrs. Dorothy Dean Scott, and Dr. E. C. Van Dyke. An important accession also was the Walter Stalder bequest, consisting mostly of books and serials on petroleum geology.

The Academy library contains more than 100,000 volumes and 60,000 maps. The number of pamphlets and serials has not been counted or estimated. The housing problem of the library continues to be one of the most critical the Academy faces, together with lack of staff to care for and make available the extensive collections of books, maps, and other source materials.

Student Section

Under direction of Mrs. Lois Fink the Student Section continued to operate at capacity during the entire year, the only limitations being the physical capacity of quarters and staff time. Plans were completed for the greatly enlarged facilities in the new building which the Section expects to occupy during the summer of 1950. Student membership aggregated 93 junior members and 45 seniors.

Since the primary function of the Student Section of the Academy is to provide opportunities for young people who have a serious interest in the natural sciences, it is noteworthy that further incentive was provided in two new procedures. A small appropriation was made to permit the appointment of student aides. Student curatorships were established for the section collections; the requirements for appointment are an examination and a continued high standard of interest and activity.

Workshop themes for the year's program included, "Rain on the Land," a project which included study of weather, storm plotting, and the story of

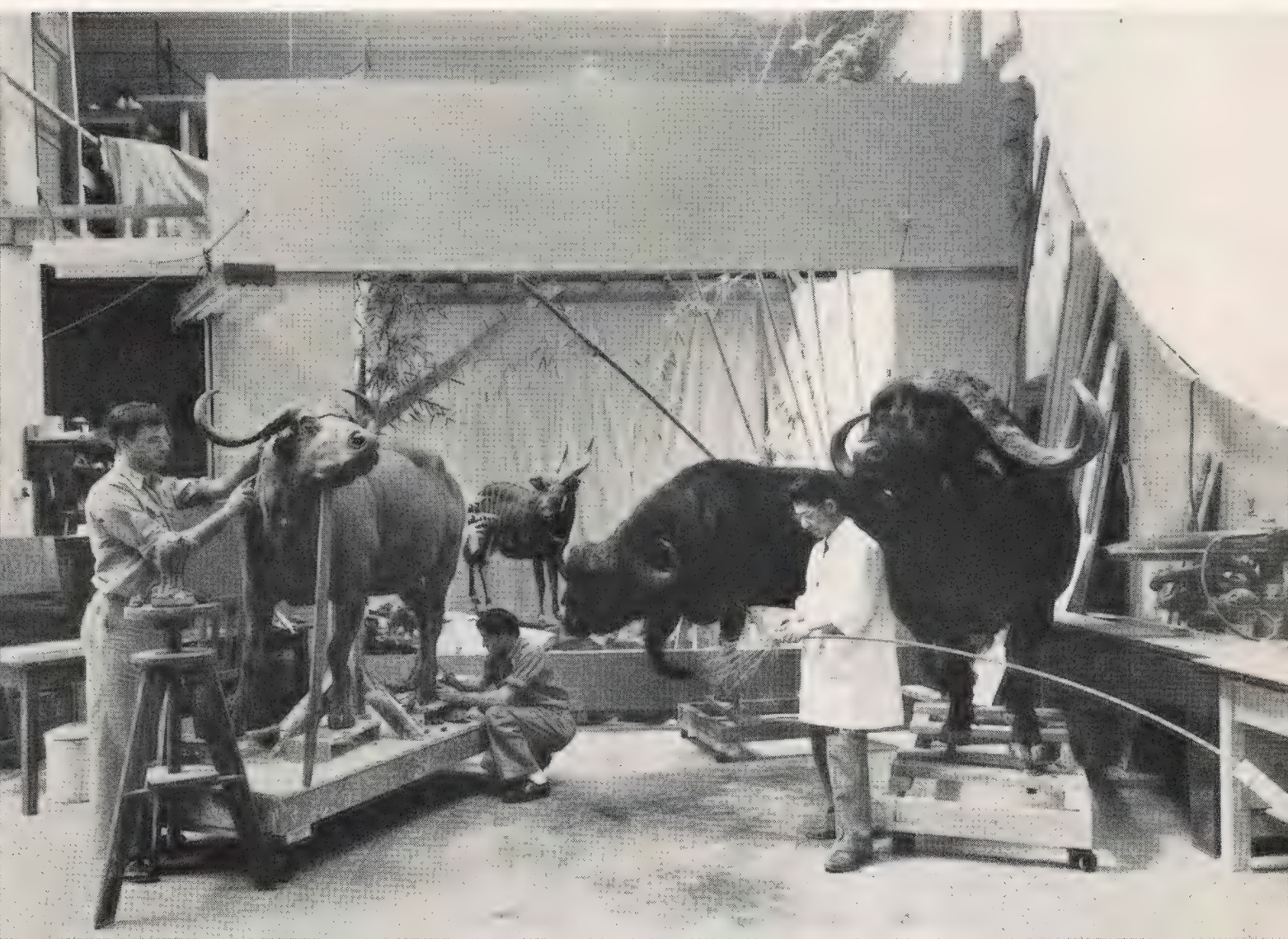
plants and animals from the route of melting snow to the sea. Other study programs covered such topics as, "Collecting for the Academy," "Trails to Summer," and an open house program, "Becoming a Naturalist."

A student-prepared exhibit of the effects of erosion, demonstrated on a model of a portion of Lone Mountain, was constructed by the members of the section and exhibited in the Youth Talent Show sponsored by the San Francisco *Chronicle* and the Chamber of Commerce.

Exhibits

The major attention of the Department of Exhibits has been given to the preparation of materials for the new building. Four large dioramas, utilizing Simson materials, and which will amplify the African story, will be ready for installation as soon as the building is completed. Planning and some construction work on the Hall of Astronomy have been done, notably a special case for eighty watches of the William Barclay Stephens collection.

Preparing the buffalo group for a diorama in the extension of the Simson African exhibits



Four temporary exhibits were arranged and utilized during the year. Two large panels, designed by Mr. Willard Rosenquist of the University of California, present graphically the story of the Morrison Planetarium and are on display in North American Hall. A display of fish parasites for the Sportsman's Show was prepared. Photograph and print displays in North American Hall during the year have included Toshio Asaeda's photographs, "Off the Beaten Track in the Pacific," Cedric Wright pictures of the high Sierras lent by the Sierra Club, and a group of reproductions of the famous Elliot pheasant lithographs, presented to the Academy by Mr. Claude Hooke of Napa, California. A graphic presentation of the Academy 1900-1950 was prepared for display at the annual meeting on February 15, 1950.

Dr. Hanna and the staff of the instrument shop assembling projector parts for the Morrison planetarium

The Steinhart Aquarium continued to attract wide public attention with unique and unusual exhibits accessioned during the year. Once more turkey fish were displayed, having been absent from the tanks since prior to the war. Through the courtesy of the Standard Oil Company of California, the tanker F. S. Bryant was equipped wih special tanks to transport tropical fish to the Aquarium from Hawaii where special arrangements were made with the Honolulu Aquarium for collecting. George, a baby leopard seal and his companion Brownie, a young sea lion, have merited considerable attention from the public.

Shop Activities

The facilities and personnel of the instrument and optical shop were devoted almost entirely during the year to the construction of the projector for the Morrison Planetarium. While progress has seemed slow owing to the necessity of detailed designing as the work is carried along, nevertheless at the close of the year the planet cages, representing the most complicated part of the instrument, have been nearly completed.

Only a very limited amount of work was done for other institutions and this consisted generally of that requiring operation of our high-vacuum coating equipment. A second unit was added to this during the year, one which employs high-frequency current for heating. This equipment was constructed by Mr. Norman Grant, solely through his interest in the welfare of the Academy. It may be recalled that he performed most helpful service during the war in connection with installation of electrical instruments.

Much new equipment has been secured during the year through the distribution of such things as we need by the State Agency for Surplus Property. The cost has been a nominal handling charge only. Thus there have been obtained hundreds of small tools and many electric testing and operating units which otherwise would have entailed an expenditure of several thousand dollars from the planetarium fund. In this connection there must be mentioned also the U. S. Air Force which has supplied 40 valuable lenses for installation in the star sphere.

Through the generosity of friends, the cooperation of other institutions and of government agencies, and the unflagging efforts of a loyal staff who regard their work as a labor of love, the Academy is able to move steadily forward, and to carry out undertakings that would otherwise be far beyond its limited means.

R. C. M.

PUBLICATIONS BY MEMBERS OF THE ACADEMY'S STAFF IN 1949

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Hanna, G. D., and Hertlein, L. G.—Two New Species of Gastropods from the Middle Eocene of California. Jour. Paleontology, 23:392-394, 1 plate.

Hanna, G. D., and Strong, A. M. West American Mollusks of the genus Conus. Proc. Calif. Acad. Sci., (4), 26:247-322, plates 5-10, 4 text figs.

Herald, E. S.—(Book Review) Between Pacific Tides, by Edward F. Ricketts, and Jack Calvin. Pacific Discovery, II, 1:30-31.

Notes on the Effect of Aircraft-distributed DDT-Oil Spray upon Certain Philippine Fishes. Jour. Wildlife Management, 13, 3:316-318.

(Book Review) Natural History of Marine Animals, by G. E. MacGinitie and Nettie MacGinitie. Pacific Discovery, II, 4:32.

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Effects of DDT-Oil Solution upon Amphibians and Reptiles. Herpetologica 5, 6:117-120.

Herald, E. S., and Strickland, R. R.—An Annotated List of the Fishes of Homosassa Springs, Florida. Quart. Jour. Fla. Acad. Sci., 11, 4:99-109.

Hertlein, L. G., and Hanna, G. D.—Two New Species of Mytilopsis from Panama and Fiji. Bull. So. Calif. Acad. Sci., 48:13-18, plate 4.

Hertlein, L. G., and Strong, A. M.—Note on the Nomenclature of Two Marine Gastropods from the Galapagos Islands. Nautilus, 62:102-103.

Eastern Pacific Expeditions of the New York Zoological Society. XL. Marine Mollusks from West Mexico and Central America. Part VII. Zoologica, N. Y. Zool. Soc., 34, pt. 2, 9:63-97, plate 1.

Eastern Pacific Expeditions of the New York Zoological Society. XLI. Marine Mollusks from West Mexico and Central America. Part VIII. Zoologica, N. Y. Zool. Soc., 34, pt. 4, 19:239-258, plate 1.

Howell, J. T.—Three new Arizona Plants. Leaflets of Western Botany, 5:148-151.

Eight Days in the Revillagigedo Islands. Idem. 5:157-162.

The Rediscovery of Antirrhinum ovatum. Idem. 5:184-185.

Marin Flora; Manual of the Flowering Plants and Ferns of Marin County, California. Berkeley, Univ. of Calif. Press. v-323 pp., illus.

Plant Types in the Herbarium of the California Academy of Sciences, I. The Wasmann Collector, 1:169-174, II. Idem. 7:220-230. Based on the catalogue prepared by Thomas H. Kearney.

Cirsium undulatum in Southern California. Leaflets of Western Botany, 5:156.

Judean Pellitory in California. Loc. cit.

Ornithopus roseus in California. Idem. 5:186.

Another Lettuce in Oregon. Loc. cit.

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Arctic Hairgrass in the Sierra Nevada. Loc. cit.

Further California Records of Brachypodium. Idem. 5:188.

California Records of Russian Olive. Loc. cit.

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Four Weeks Were Not Enough. 1949 Sierra Club Base Camp Report, pp. 121-122 (mimeographed).

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Kearney, T. H. —Malvaceae: a New Subtribe and Genus, and New Combinations. Leaflets of Western Botany, 5:189-191.

Miscellaneous New Combinations. Idem. 197.

Kelley, D. G.—(Book Review) Mountain Prospect, by Scott Russell. Pacific Discovery, II, 1:31-32.

(Editorial) On Breaking New Ground. Pacific Discovery, II, 2:2-3.

(Book Review) Fieldbook of Natural History, by E. Laurence Palmer. Pacific Discovery, II, 3:32.

Kelley, D. G.—(Editorial) Who is "The Reader"? Pacific Discovery, II, 4:3.

(Editorial) A Scientist's Loyalty. Pacific Discovery, II, 5:3.

(Book Review) Yosemite, the Big Trees, and the High Sierra: a Selective Bibliography, by Francis P. Farquhar. Pacific Discovery, II, 6:29-30.

(Book Review) The Wise One, by Frank Conibear and J. L. Blundell. Pacific Discovery, II, 6:30.

(Book Review) A Concise Encyclopedia of World Timbers, by F. H. Titmuss. Pacific Discovery, II, 6:30.

(Book Review) True Bear Stories, by Joaquin Miller. Pacific Discovery, II, 6:30.

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(Editorial) The Integrity of the Chinese. Pacific Discovery, II, 1:2-3.

Flight into Tomorrow. Pacific Discovery, II, 2:18-21.

(Editorial) High Country. Pacific Discovery, II, 3:3.

(Book Review) China: The Land and the People, by Gerald F. Winfield. Pacific Discovery, II, 3:30.

Fisherman's Luck; The Story of the California Sardine Industry. California—Magazine of the Pacific, pp. 13-14, 27, December, 1949.

Miller, R. C. and Rigg, G. B.—Intertidal Plant and Animal Zonation in the Vicinity of Neah Bay, Washington. Proc. Calif. Acad. Sci., (4), 26:323-351, 8 text figs.

Orr, R. T.—Mammals of Lake Tahoe. California Academy of Sciences, San Francisco, 127 pp., illus., map on end paper.

Death from Fright in Long-tailed Shrews. Jour. Mamm., 30, 2:195-196.

On the Lolo Trail. Pacific Discovery, II, 3:16-19.

(Book Review) Flight of Birds, by John H. Storer. Pacific Discovery, II, 3:31.

Rakowicz, M. R.—The Chocolate Gourami—a Mouthbreeder. Aquarium Jour., 20, 10:247-248, 1 col. plate.

The Silver-tip Tetra. Aquarium Jour., 20, 12:312-314, 1 photo.

Rogers, F. L.—Three New Subspecies of Balanus amphitrite from California. Jour. Entomol. & Zool., 41, 2:1-12, 1 plate.

Ross, E. S.—(Book Notice) The Insect Guide, by Ralph B. Swain. Pacific Discovery, II, 2:30.

Simpson, D. A.—Poor Man's Sea Horse—the Pipefish. Aquarium Jour., 20, 5:129-132, 1 photo.

Bringing Them Back Alive Can Be Killing. Pacific Discovery, II, 6:3-8, 3 photos.

Slevin, J. R.—Range Extension of *Xantusia vigilis*. Herpetologia, 5, 6:148.

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REPORT OF THE TREASURER

For the Fiscal Year Ended June 30, 1949, and the Six Months Ended December 31, 1949

The new construction funds and their conversion into a now visible building continue to be the most significant subject for the Treasurer's comment. The fund balances as at June 30, 1948, amounting to $784,500 were increased during the subsequent eighteen months by $227,500, making over $1,000,000 available for the construction of the Alexander F. Morrison Planetarium, the Alexander F. Morrison Auditorium, the addition to the Leslie Simson African Hall, and the James Moffitt Memorial, which are all in progress under a unified plan. In order that these projects may be brought to completion at the same time the Board of Trustees has arranged for a loan, should it be necessary, in anticipation of receipts from pledges and new subscriptions. A little more than half of the funds on hand had been disbursed for construction and equipment up to December 31, 1949.

On the following pages there are set forth the condition of the respective funds of the Academy as at December 31, 1949, and a summary of the changes that have taken place in these funds since June 30, 1948. The accounts of the Academy are kept on the basis of a fiscal year ending June 30, but in order to present a more up-to-date statement, they have been extended in this report for an additional period of six months to December 31, 1949. Round figures are used for convenience.

Francis P. Farquhar, *Treasurer.*

GENERAL OPERATING FUND

Income, Expenses, and Transfers

Income

	Year ended June 30, 1949		*Six Months ended Dec. 31, 1949*	
Net income from Commercial Building	$146,300		$84,600	
Membership dues	5,700		500	
Miscellaneous	8,000		1,100	
		$160,000		$ 86,200

Expenses

Museum and departments operations	$104,800		$49,900	
"Pacific Discovery" (net)	14,900		5,500	
Trustees' expenses	7,600		1,600	
		$127,300		$ 57,000
Excess of income over expenses		$ 32,700		$ 29,200
Balance of fund at beginning of period		$138,100		$ 92,900
		$170,800		$122,100

Transfers Between Funds

Museum Fund				
Dudley Moulton Collection	$ 1,200		$ 600	
Part reimbursement, prior year account	($800)			
Endowment Funds				
To restore depreciation reserve for prior years	$ 77,500			
		$77,900		$ 600
Balance of fund at end of period		$92,900		$121,500

FUND BALANCE SHEET

As at December 31, 1949

Funds	*Total*	*Cash Items*	*Stocks and Bonds*	*Miscellaneous*	*Fixed Property*
General Operating	$ 121,500	$ 85,800		$35,700	
Special Purposes	38,800	12,600	26,200		
Endowment	857,800	5,800	112,100		739,900
Steinhart Trust	310,800	600	9,000		301,200
Museum	1,346,000				1,346,000
New Construction	491,700	132,800	358,900		
	$3,166,600	$237,600	$506,200	$35,700	$2,387,100

CHANGES IN FUNDS – JUNE 30, 1948 TO DECEMBER 31, 1949

	Balance June 30, 1948	Year ended June 30, 1949 Increase	Year ended June 30, 1949 Decrease	Balance June 30, 1949	Six Months ended Dec. 31, 1949 Increase	Six Months ended Dec. 31, 1949 Decrease	Balance Dec. 31, 1949
General Operating Fund	$ 138,100	$ 32,700	$ 77,900	$ 92,900	$ 29,200	$ 600	$ 121,500
Special Purpose Funds							
W. B. Scaife Lecture	$ 10,100	$ 500	$ 600	$ 10,000	$ 200	$ 100	$ 10,100
Alvord Botanical	5,400	100		5,500			5,500
J. D. Grant	10,600	100		10,700			$ 10,700
Trustees					5,100		5,100
M. Hall McAllister					2,500		2,500
Taylor Botanical Library					1,200		1,200
Other	3,300	200		3,500	200		3,700
	$ 29,400	$ 900	$ 600	$ 29,700	$ 9,200	$ 100	$ 38,800
Endowment Funds							
James Lick	$ 804,900			$ 804,900	100		$ 805,000
Charles Crocker	20,000			20,000			20,000
John W. Hendrie	32,800			32,800			32,800
	$ 857,700			$ 857,700	$ 100		$ 857,800
Ignatz Steinhart Trust							
Aquarium	$ 310,700	$ 100		$ 310,800			$ 310,800
Museum Fund							
North American Hall	$ 88,500			$ 88,500			$ 88,500
Simson African Hall	174,000			174,000			$ 174,000
Collections	296,100	1,200		297,300	600		297,900
Furniture and equipment	21,400	14,000		35,400			35,400
Library & publications	230,400	2,900		233,300			233,300
New construction in progress	5,100	146,800		151,900	365,000		516,900
	$ 815,500	$164,900		$ 980,400	$365,600		$1,346,000
New Construction Funds							
Alexander F. Morrison Planetarium	$ 278,300	$215,900	$137,200	$ 357,000	$ 1,200	$260,500	$ 97,700
Alexander F. Morrison Auditorium	180,500	3,200	1,500	182,200	1,800	$100,000	84,000
Leslie Simson African Hall	278,400	2,900	9,400	271,900	1,000	4,400	268,500
Ida M. Carmany Terrarium	5,200			5,200	100		5,300
James Moffitt Memorial	28,100	300		28,400			28,400
Alice Eastwood Herbarium	12,800	800	6,100	7,500	300		7,800
Memorial Fountain	1,200			1,200		1,200	
	$ 784,500	$223,100	$154,200	$ 853,400	$ 4,400	$366,100	$ 491,700
Total Funds	$2,935,900	$421,700	$232,700	$3,124,900	$408,500	$366,800	$3,166,600

CALIFORNIA ACADEMY OF SCIENCES

Museum and Aquarium Personnel*

ADMINISTRATIVE

Robert C. Miller, *Director*
G. Dallas Hanna, *Administrative Assistant*
Vashti F. Hawley, *Secretary to the Director*

CLERICAL

Hazel Blyler
Winifred Booker
Vida Brooke
Catherine Campbell
Evelyn Deasy
Adele J. Doss
Georgia Fitzsimmons
Lilian I. Grainger
Victoria Griffen
Minerva Hirst
Bula Wrisley

EDITORIAL

Benjamin Draper
Don G. Kelley
Edward S. Kessel

DEPARTMENT OF AQUATIC BIOLOGY

Earl S. Herald, *Curator*
Robert P. Dempster, *Aquatic Biologist*
Maurice R. Rakowicz, *Assistant Aquatic Biologist*
Thomas C. Groody, *Research Assistant*

DEPARTMENT OF BOTANY

Alice Eastwood, *Curator Emeritus*
John T. Howell, *Curator*
Elizabeth McClintock, *Assistant Curator*
Olga A. Padgett, *Assistant*
Elizabeth M. Vincent, *Assistant*

DEPARTMENT OF ENTOMOLOGY

Edward S. Ross, *Curator*
Hugh B. Leech, *Associate Curator*
Edward L. Kessel, *Associate Curator*
John W. Green, *Technical Assistant*

* February 28, 1950

DEPARTMENT OF EXHIBITS

CECIL TOSE, *Preparator*
TOSHIO ASAEDA, *Assistant Preparator*
ELVIS L. SPRIGG, *Assistant*
VELMA HARRIS, *Assistant Preparator*
RAYMOND SMITH, *General Assistant*

DEPARTMENT OF HERPETOLOGY

JOSEPH R. SLEVIN, *Curator*

DEPARTMENT OF ICHTHYOLOGY

W. I. FOLLETT, *Curator*
LILLIAN DEMPSTER, *Technical Assistant*
SERGEI RUBTZOFF, *Assistant*

LIBRARY

VERONICA J. SEXTON, *Executive Librarian*
INGEBORG B. BOECKEL, *Assistant*
KENNETH F. INNES, JR., *Assistant*

DEPARTMENT OF ORNITHOLOGY AND MAMMALOGY

ROBERT T. ORR, *Curator*
SUSANNA H. MEANS, *Assistant*
MARY L. PERRY, *Assistant*

DEPARTMENT OF PALEONTOLOGY

G. DALLAS HANNA, *Curator*
LEO G. HERTLEIN, *Associate Curator*
DELBERT G. GOODWIN, *Assistant*
MYRTLE KUHLMEYER, *Assistant*

HONORARY CURATORS

WILLIAM B. PITTS, *Gem Minerals*
WILLIAM BARCLAY STEPHENS, *Horology*
EDWIN C. VAN DYKE, *Entomology*
M. VONSEN, *Mineralogy*

RESEARCH ASSOCIATES

C. C. Church, *Paleontology*
E. O. Essig, *Entomology*
G. F. Ferris, *Entomology*
J. Linsley Gressitt, *Entomology*
E. S. Guedet, *Entomology*
Thomas H. Kearney, *Botany*
Earle G. Linsley, *Astronomy*
E. Gorton Linsley, *Entomology*
Anatole S. Loukashkin, *Ornithology and Mammalogy*
Borys Malkin, *Entomology*
Lewis S. Rose, *Botany*
Lawrence W. Saylor, *Entomology*
Allyn G. Smith, *Paleontology*
A. M. Strong, *Paleontology*
R. L. Usinger, *Entomology*
T. Dan Webster, *Ornithology and Mammalogy*
Francis X. Williams, *Entomology*

JUNIOR SCIENCE GROUP

Lois Fink, *Supervisor*
Joanne Taylor, *Assistant Supervisor*

SHOP

G. Dallas Hanna, *Superintendent*
A. S. Getten, *Instrument Designer*
Raymond Greeby, *Instrument Maker*
Frances Greeby, *Assistant in Optics*
A. C. Gundred, *Instrument Maker*
Herbert Jow, *Draftsman*

MAINTENANCE AND OPERATING

John M. Barclay
Benjamin T. Culleton
Nial P. Farley
Norval J. Green
Arnold Gschwend
Frederick W. Herms
John R. Hooper
Raymond L. Jones
George Koltunovsky
John McKenna
Eugene L. Mooney
Arthur J. Noonan
Donald A. Simpson
William W. Schneebeli
Nicholas Udaloff
Thomas J. Welch
Rachel Wortherly